AD-A283 538

Military-Civilian Working Relationships

Cathy A. Stawarski and Donald A. Smith
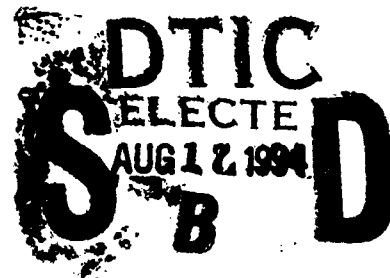Human Resources Research Organization

Robert N. Kilcullen and Carlos K. Rigby
U.S. Army Research Institute

Strategic Leadership Technical Area
Thomas O. Jacobs, Chief

Manpower and Personnel Research Division
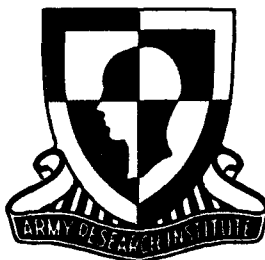**Zita M. Simutis, Director**

DTIC
ELECTE
AUG 1 Z 1994
S B D

July 1994

94 8 16 10 4

DTIC QUALITY INSPECTED 1

94-25932

United States Army
Research Institute for the Behavioral and Social Sciences

U.S. ARMY RESEARCH INSTITUTE
FOR THE BEHAVIORAL AND SOCIAL SCIENCES

A Field Operating Agency Under the Jurisdiction
of the Deputy Chief of Staff for Personnel

EDGAR M. JOHNSON
Director

Research accomplished under contract
for the Department of the Army

Human Resources Research Organization

Technical review by

Joel Savell

REPORT DOCUMENTATION PAGE

1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE 1994, July	3. REPORT TYPE AND DATES COVERED Final Oct 87 – Apr 93

4. TITLE AND SUBTITLE	5. FUNDING NUMBERS
Military–Civilian Working Relationships	MDA903-87-C-0846 63007A
6. AUTHOR(S) Stawarski, Cathy A.; Smith, Donald A. (HumRRO); Kilcullen, Robert N.; and Rigby, Carlos K. (ARI)	792 2402

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)	8. PERFORMING ORGANIZATION REPORT NUMBER
Human Resources Research Organization 66 Canal Center Plaza, Suite 400 Alexandria, VA 22314	--

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)	10. SPONSORING/MONITORING AGENCY REPORT NUMBER
U.S. Army Research Institute for the Behavioral and Social Sciences ATTN: PERI-RO 5001 Eisenhower Avenue Alexandria, VA 22333-5600	ARI Research Note 94-24

11. SUPPLEMENTARY NOTES

Carlos K. Rigby, Contracting Officer's Representative.

12a. DISTRIBUTION/AVAILABILITY STATEMENT	12b. DISTRIBUTION CODE
Approved for public release; distribution is unlimited.	--

13. ABSTRACT (Maximum 200 words)

Because civilian and military personnel often must function as one unit, positive military/civilian working relationships are critical to the successful functioning of the Army. The primary purpose of this report is to analyze some of the differences between civilians who have civilian supervisors and civilians who have military supervisors. Data from FY88 Biennial Surveys of Army Civilians are used to focus analyses on attitudes regarding evaluations of supervisors, perceived supervisor support for training, knowledge and use of performance appraisal procedures, cooperation and efficiency of work groups, the perception of civilians' importance to management, and general satisfaction.

A two-stage data analysis process is used. Analyses of variance are performed to focus on promising dependent variables. The significant results are followed up with regression analyses to control for unwanted sources of variation and to determine the magnitude of the effects of interest.

The results should be interpreted with caution. Although the majority of the regression analyses obtain results that are statistically significant, the percent
(Continued)

14. SUBJECT TERMS		15. NUMBER OF PAGES
Biennial survey Military-civilian relationships Civilian personnel Performance appraisal Leadership Personnel management (Continued)		58
		16. PRICE CODE --

17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
Unclassified	Unclassified	Unclassified	Unlimited

13. ABSTRACT (Continued)

of variance explained is negligible and therefore not meaningful in an operations sense.

14. SUBJECT TERMS (Continued)

Total army
Satisfaction
Supervisors

FOREWORD

In today's environment of downsizing and increasingly technological weaponry, it is essential to focus on the Total Army and to do whatever is necessary to ensure that it is functioning efficiently and effectively. The Civilian Leadership Research Program focuses on the leadership of Army civilians. This report looked at some differences between military and civilians supervisors as perceived by Army civilians.

Nearly 40 percent of the Army's personnel resources are civilians employed in support roles throughout the world. The civilian personnel workforce is an essential component of the Total Army team and contributes significantly to the accomplishment of the Army mission. The management of a workforce as complex, heterogeneous, and dispersed as that of Army civilian personnel requires more than ordinary personnel management system.

An efficient and effective Total Army is critical to maintenance of our national defense. It is essential to understand the similarities and differences between the civilian personnel management as performed by civilians and by military personnel. This report also goes a step beyond that by examining the influence of the workgroup composition using sophisticated data analysis methods.

ACKNOWLEDGMENTS

EXECUTIVE SUMMARY

Requirement:

Recognizing that civilian and military personnel often must function as one unit, the U.S. Army Research Institute for the Behavioral and Social Sciences (ARI) and the Department of the Army Directorate for Civilian Personnel (DCP) have undertaken research dealing with civilian supervisors in the Army. Positive military/civilian working relationships are critical to the successful functioning of the Army. Military personnel are used in positions requiring military incumbents by reasons of law, security, maintenance of morale and discipline, rotation, combat readiness, and training, or where military background is necessary for successful performance of duties involved. All other positions are assigned to civilian personnel; they are used when they possess skills that would not be otherwise available, to ensure continuity of administration and operations, to release military personnel for duties that are primarily military, or to provide a nucleus of trained personnel to expand support forces of newly established or enlarged activities. Whatever the situation, military and civilian personnel must work cooperatively within the same immediate environment.

Procedure:

The primary purpose of this report is to take an initial step in the study of military-civilian relationships by analyzing some of the differences between civilians who have civilian supervisors and civilians who have military supervisors. Additionally, differences in attitudes in workgroups with different proportions of military and civilian personnel are examined. Data from the FY88 Biennial Surveys of Army Civilians provide the opportunity to focus analysis on attitudes in six areas: the individuals' evaluations of their supervisors; perceived supervisor support for training; knowledge and use of performance appraisal procedures; cooperation and efficiency of workgroups; whether civilians are perceived as important to management; and general satisfaction.

A two-stage data analysis process was used to investigate the relationships between the independent variables (i.e, workgroup and supervisor type) and the dependent variables. (Dependent variables were focused on the six content areas.) In the first stage, analyses of variance (ANOVAs) were performed to identify promising dependent variables, yielding several significant main effects and interaction effects. Whereas ANOVA procedures provide for the detection of reliable group differences, they are limited in the ability to account for the magnitude of the effects or unwanted sources of variance. For that reason the significant results are followed up with regression analyses. In the regression analyses, demographic variables are entered first into the equation as a block, followed by supervisor type and

workgroup composition as the second block, and the interaction of supervisor type and workgroup composition as a third block.

Findings:

The results of the regression analyses indicate that the amount of variance accounted for by supervisory type and workgroup composition, while statistically significant, may not be meaningful (less than 2%). Thus, differences in supervisor type and workgroup composition do not substantially affect the responses of the employees and supervisors on the Biennial Survey.

The importance of these findings stems from the methodological cautions they raise. With the exception of the final regression analyses, the research effort took a form often found. The survey contained apparently reasonable items, and was administered to a very large and apparently random sample. The initial analyses were of a type (ANOVA) that typically might be performed on large sample survey data using a statistical analysis package, given time pressure to complete the analyses and provide "answers" to managers. Further, the logic is typical of that used by operational agencies. (Set up apparently reasonable hypotheses, which are then tested by "straight-forward" analyses of the data.)

The first set of analyses—which in some cases is all that would be done—revealed many apparently highly significant differences associated with supervisor type and workgroup composition. Had these apparently meaningful results been reported without further examination, serious—and wasteful—further efforts might have been made to identify the source of the "problem" and improve the situation. However, subsequent analyses designed to control for subtle demographic effects revealed that these two apparently important "independent variables" actually had only trivial effects. Without the more refined analyses, substantially incorrect conclusions would have been reached and wasteful further efforts might have been undertaken.

Utilization of Findings:

The findings reported here demonstrate the value of investment in (a) systematic planning in the early stages of a research effort to ensure that data collection instruments tap all relevant variables, and (b) an analysis that comprehensively models the sources of variance in the data.

MILITARY-CIVILIAN WORKING RELATIONSHIPS

CONTENTS

LIST OF TABLES

Page

MILITARY-CIVILIAN WORKING RELATIONSHIPS

Introduction

As part of the continuing effort to improve concepts and practices for efficient use of civilian personnel in the Army setting, the U.S. Army Research Institute for the Behavioral and Social Sciences (ARI) and the Department of the Army Directorate for Civilian Personnel (DCP) have undertaken research programs dealing with supervisors of civilians in the Army. Because civilian and military personnel often work closely together -- albeit under two different personnel systems -- and must function as one unit, attention is being focused on elements that influence military-civilian working relationships.

Positive military-civilian working relationships are critical to the successful functioning of the Army. Military personnel are used in Table of Distribution and Allowances (TDA) positions that require military incumbents by reasons of law, security, maintenance of morale and discipline, rotation, combat readiness, and training, or that require military background for successful performance of the duties involved. All other positions are delineated for civilian personnel. Generally, civilians are used to provide special skills that would not otherwise be available, to ensure continuity of administration and operations under changing circumstances, to release military personnel required to perform duties that are primarily military, or to provide a nucleus of trained personnel to expand support forces of newly established or enlarged activities. Whatever the particular situation, military and civilian personnel must work cooperatively within the same immediate environment. If these working relationships are poor, productivity will be adversely affected.

The primary purpose of the current report is to take an initial step in the study of military-civilian relationships by analyzing some of the differences between civilians who have civilian supervisors and civilians who have military supervisors. A second purpose is to examine the differences in attitudes in workgroups with different proportions of military and civilian personnel -- that is, when the civilian employee or supervisor is in a workgroup that is primarily civilian, half civilian and half military, or primarily military.

Data from the FY88 Biennial Surveys of Army Civilians provide the opportunity to focus analysis on individuals' evaluations of their supervisors, their perceptions of their supervisor's support for training, knowledge and use of performance appraisal procedures, cooperation and efficiency in the workgroups, whether civilians are perceived as important to management, and general satisfaction.

The Biennial Survey is an employee opinion survey that taps attitudes on a variety of issues. Neither the instrument nor the survey data collection methodology were designed specifically to collect information on military-civilian relationships. Although the survey does contain items that address these relationships, an exploration of relevant attitudes requires a carefully planned data analysis strategy so that significant relationships among the variables of interest might be teased out from this large and rich data set. These analytic issues are discussed in more detail in the next section of this chapter. Following the "Methodological

Approach," the "Background" section reviews the literature on the variables chosen for analysis.

Methodological Approach

This research utilized a two-stage data analysis that was designed to combine the unique strengths and avoid the inherent weaknesses of analysis of variance (ANOVA) and multiple regression. The first stage involved a series of two-way ANOVAs to identify differences in the dependent variables that could be attributed to the different ANOVA treatment effects. The ANOVAs were designed the show whether the factors of supervisor type (civilian or military) and workgroup composition (primarily military, military/civilian, primarily civilian) have independent and/or interactive effects on a variety of dependent variables.

One of the strengths of the ANOVA procedure is that it provides clear findings that are easily interpreted, and, as a result, it is a commonly used procedure. Because of the large sample size and the lack of an experimental setti.ᵤ in the current study, however, ANOVA results may provide an oversimplified and misleading view of the relationships among the variables of interest. ANOVA is designed for experimental settings that involve careful control procedures and random assignment of subjects to treatment conditions. In situations where these procedures are not implemented, it is possible that significant effects can result from unintended sources of variation (e.g., demographic characteristics of subjects). Additionally, as with all statistical procedures, reliable differences must be interpreted in the context of the magnitude of the treatment effect. With sufficient statistical power even a trivial treatment effect can achieve statistical significance. This particular problem can be handled by computing a statistic like "omega-squared" that provides an index of treatment size, but this does not address the first problem of controlling unwanted sources of variation.

Because of the concerns about the use of the ANOVA procedure, it is advisable to use it to focus on promising dependent variables, and then to follow up on the significant results with regression analyses to control for unwanted sources of variation and to determine the magnitude of the effects of interest. The regression analysis permits statistical control over unwanted sources of variation by including them in the regression equation. Regression also directly indicates the effect size by interpreting the proportion of variance accounted for by each variable. Even though the entire analysis can be achieved through multiple regression, the additional power and flexibility of multiple regression is not without costs, the primary ones being the complexities associated with constructing, executing, and interpreting appropriate regression equations. The most direct way to make multiple regression more tractable is to treat limits on both the number of regression runs and the number of variables used in each run.

In this study, the hierarchical multiple regression analyses were performed on variables with significant ANOVAs. The purpose of these analyses was to assess the strength of the relationship of the dependent variable with supervisor type or workgroup composition after accounting for the effects of various demographic factors (e.g., gender, race, grade level, length of service, education).

Background

That difficulties may be encountered when military and civilian personnel must work closely within the same activity has been recognized for many years (e.g., Paulsen, 1965). However, the importance of this working relationship has been highlighted more recently by Woolley, Croan, and Cohart in their Army Strategic Plan for Civilian Personnel Management Research: A Roadmap for the Future (1986). This Roadmap dealt with identifying, prioritizing, and managing research activities to explore the concepts and problems of managing civilian personnel in an Army setting. The plan was developed for the Department of the Army's Civilian Personnel Program, and was based on information obtained in open-ended interviews and focus groups conducted with civilian and military personnel over a 10-month period.

The primary purpose of the Roadmap was "to provide the Army's civilian policy and managerial personnel with a systematic framework for developing a knowledge base which can lead to improved management of the civilian personnel workforce" (p. 1). "Military-civilian relationships" were identified as one of the research areas designed to support the major goal and objectives of the Army's civilian personnel program.

Establishing Priorities for Civilian Personnel Management Research in the Army (Clark, Sweeney, and Savell, 1988) was a follow-up to the Roadmap. A questionnaire was designed containing 16 broad areas for possible research based on the Roadmap. It was distributed to 104 key individuals in all Army major commands, including both military and civilian personnel. Survey participants were to rate each of the 16 research areas on the following:

- Value of improvement in the area
- Seriousness of the consequences of no improvement
- Likelihood that additional information would be used.

A fourth dimension, an overall or composite scale, was calculated from these ratings. In the composite scores, the research effort of building effective military/civilian relations received an unweighted composite score (i.e., a priority rank) of 10. In other words, of the 16 research areas that were prioritized, the topic of military/civilian relations was ranked as middle priority in Army Civilian Personnel Management Research. It was one of the topics that respondents most often identified as benefitting strongly from systematic research efforts.

Specific areas of concern within the broad category of military-civilian relationships have been cited by various sources as needing further research and/or intervention. Examples include working relationships (Broedling, Lau & Newman, 1981; Reznick, 1985; Stupak, 1981; Woolley, Croan, & Cohart, 1986), performance appraisal procedures (Woolley et al., 1986) and differences in the cultures (Broedling et al., 1981; Stupak, 1981; Woolley et al., 1986). Many of these concerns are either specific to, or heightened by, situations in which the supervisor and subordinate are of different status (i.e., military supervisor with civilian subordinate or vice versa). Specific comments from some sources on the content areas which will be addressed in the current report are summarized below.

Evaluation of supervisors. Supervisors, whether civilian or military, have a range of responsibilities that include providing subordinates with information on career appraisals, training and development opportunities, and formulating individual development plans (IDPs) and performance standards, and participating in employee evaluations (AR 690-950, Career Management). In addition, military supervisors are part of a system that emphasizes command.

In his experience in a research and development engineering environment, Reznick (1985) observed differing instances of poor military-civilian interaction. Some situations were aggravated by a military officer in a supervisory position who appeared to be more concerned with taking credit for program accomplishment for personal benefit than with the product itself. Such individuals often failed to recognize and support the predominantly civilian research and development personnel who had done the majority of the program preparation. Some officer supervisors deemphasized important long-term research in favor of short-duration projects that had immediately observable payoffs; subordinates sensed they were being used, and as a result morale and productivity decreased. On the other hand, Reznick also observed civilian managers harming a military-civilian team when a well-established civilian manager would not willingly share program background or insight with military peers. Reznick hypothesized that the civilian manager's unwillingness to share the information may have been due to a lack of trust or respect for the contributions that the military member would make or a suspicion that innovative ideas for work already accomplished would be confiscated for the other's benefit. Reznick reported that when such situations occurred, programs stagnated due to a lack of new approaches, constructive criticism, and support from outside the organization.

Specifically, related to the question of civilians with civilian versus military supervisors J.L. Crum surveyed attitudes of personnel toward civilian and military supervisors (cited in Woolley et al., 1986). He reported that civilians felt that military bosses were better supervisors; however, individuals with civilian bosses were more likely to feel there was a good working relationship between civilian and military personnel.

Perceived supervisor support for training. Training is an important dimension in the Army career management system, which provides clear lines of progression to successively more responsible positions, along with a coordinated training and development program for occupational specialties using both Army and outside facilities. One component of this system is set forth in an Army regulation (AR 690-400) which specifically outlines Army's training and development program including requirements for an annual review of training needs to be conducted by supervisors and preparation of an individual development plan (IDP) for each employee. In addition, the Army Civilian Training, Education and Development System (ACTEDS) is an approach to assuring effective training and development of the Army's career program employees.

Some of the differences between civilian and military cultures are reflected in their training programs--specifically in the perceived relationship between training and promotion:

> The military professional enters a systematic training and developmental
> program that prepares him [sic] for dealing with the "big picture" as he moves

4

into an executive role; while the civilian executive's development tends to be haphazard, sporadic, and somewhat too technical in preparation for executive positions or perspectives. (Stupak, 1981, p. 71)

Woolley et al. (1986) discussed anecdotal evidence that suggested the military individual gets promoted and then gets a new job, while the civilian counterpart gets a particular job and then gets a promotion. They hypothesized that because of this difference, military individuals can more easily see the relationship between training and promotion, whereas civilians see little apparent relationship.

Stupak (1981) recommended a more concentrated effort to improve the training and development of the civilian careerists in the Department of Defense. He further recommended more opportunities for dialogue, education, interaction, and training among officers and civilian careerists.

Knowledge and use of performance appraisal procedures. Broedling et al. (1981) studied a representative sample of Navy career civilian executives (i.e., those in GS-16, -17, -18 or equivalent Public Law positions) and military executives who supervise civilian executives or influence policy regarding their employment. They found that a major difference between the military (Navy) and civilian personnel systems was the performance evaluation systems for the two groups. Distinguishing characteristics included: (1) military promotions were based on the number allowed in each rank whereas civilian promotions were based on specific jobs to be filled; (2) military promotions were based primarily on periodic "fitness reports" while civilian promotions were based primarily on evaluations made at the time of the promotion decision.

In a related finding Woolley at al. (1986)[1] reported that personnel appraisal forms were "the one aspect of the civilian personnel system which received the most opprobrium from military respondents" (p. 92). Military respondents expressed frustration with the length and time-consuming nature of the appraisal forms, in contrast to their own rating system. On the other hand, civilians reported that many military managers were ignorant of the importance of such forms and uninformed about the process of filling them out. (Military personnel expressed similar criticism of civilians supervising military personnel.)

Cooperation and efficiency of workgroups. There are times when the intended complementarity of the military-civilian mix appears to actually foster development of antagonistic relationships. For example, Stupak (1981) reported the words of an Air Force civilian executive:

Hell, I run my agency. The colonel is simply a figurehead who's here for a short time. And after him, there will be another colonel who I will educate, train, and command. (p. 71)

---

[1] Woolley et al. (1986) interviews were conducted before the shortened appraisal forms went into general usage.

5

and a military officer in charge of a U.S. Navy research and development shop:

> The civilians really run the shop. I am here for too short a time to have a
> lasting impact. Sure, I will affect some things, but hell, the civilians will be
> here forever and if they want to, they'll change it back again. (p. 71)

In their study of military-civilian relationships within the Navy, Broedling et al. (1981) found that mutual attitudes of military and civilian executives varied from genuine teamwork and a high degree of mutual respect to intensely negative attitudes and relationships. Many of the executives respected one another as individuals but held negative attitudes toward each other's system; it was the system to which they attributed the faults, not the individuals.

Civilians are important to management. Civilians are vital to the effective and efficient functioning of the Army and there is every indication that the importance of their roles will be augmented in the future. Despite this fact, there is some question about the way in which management, particularly military supervisors, view their civilian employees.

Broedling et al. (1981) reported that all who spoke of the topic of military-civilian relations agreed that there were problems at lower levels in their organization and the problems warranted attention. There was a feeling among civilian executives that they were treated like "second-class citizens" by the military executives; however, the average military executive disagreed with this point. Military executives showed modest agreement with the idea that they know more about what is best for the Navy than do civilian executives, a point over which the average civilian executive disagreed. Stupak (1981) believes that this "cross-structural ignorance" (p. 70) is primarily a result of a lack of knowledge about the other side.

General satisfaction. The management of an organization determines the general atmosphere of the work environment. Stupak (1981) argued that military professionals make the adjustment from a management position to an executive position better than do their civilian counterparts.

> Hence, the predominantly managerial perspective of civilians conflicts with the
> clearer executive perspective of the military. (p. 70)

Further, he suggested that the military executives are educated to attain a broader perspective on strategic, managerial, and political concerns than are civilian executives.

Additional studies have revealed other aspects about the influence of an individual's work environment. Whether it's the cross-cultural ignorance (Stupak, 1981), being treated like second-class citizens (Broedling et al., 1981), or differences in management (Stupak, 1981), working in an environment that is comprised of two different personnel and career systems can be a challenge. As Paulsen (1965) suggested, individual and group goals, motives, values and incentives tend to be different in each system. Based on these findings it appears that the perception of supervisors, and workgroups can effect an individual's general satisfaction with the job.

To sum up, civilian and military personnel often work closely together and must function as a single unit; positive working relationships are critical to such functioning. The present report investigates several topic areas that bear upon the military-civilian relationship, including: evaluation of supervisors, perceived supervisor support for training, knowledge and use of performance appraisal procedures, cooperation and efficiency of workgroups, and whether civilians are perceived as important to management. In addition, the general satisfaction of civilian personnel are examined.

Source of Data

The data analyzed in the current report were drawn from the <u>FY88 Biennial Survey of Army Civilians: Formation of Item Composites and Investigation of Broad Demographic Trends</u> (Sadacca, Jones, DiFazio, Rigby, & Kilcullen, 1993). The three Survey instruments used in 1988 -- Employee Questionnaire, Supervisor Questionnaire, and Supplemental Questionnaire (completed by both employees and supervisors) -- are presented in Appendix A.[2]

It is important that the reader keep in mind the limitations of this dataset. Use of the FY88 Biennial Survey data makes it possible to analyze differences in attitudes when the civilian employee or supervisor is in a workgroup that is primarily civilian, mixed (i.e., half civilian and half military), or primarily military. Subordinates and supervisors were each asked whether <u>their</u> immediate supervisor was military or civilian, so conclusions can be drawn about employees and supervisors separately. However, because of the nature of the dataset, employees cannot be linked with their supervisor(s). Therefore, it will not be possible to make causal inferences about the relationship between the employees and the supervisors in the datasets.

The FY88 Biennial Survey data are based on a proportionate stratified random sample of full-time permanent appropriated fund Army civilians. The Army selected a sample of 14,644 civilians (9,654 employees and 4,990 supervisors) for the FY88 survey. The employee sample was stratified by nine major commands (MACOMs), gender, race/national origin (majority versus minority), and pay system (General Schedule and similar pay plans versus Wage Grade or Wage Supervisor and similar pay plans); the supervisor sample was stratified by nine MACOMs.[3] The Army civilians who were not in one of the nine MACOMs were sampled by developing a separate category called "other". Approximately 60% of the questionnaires were returned (Sadacca et al., 1990).

Individuals for whom data were available regarding their supervisor type (i.e., military or civilian) and workgroup composition (i.e., primarily military, half military/half civilian, or primarily civilian) are included in the present study. Tables 1 and 2 present the subgroups of individuals for whom data were available for the employee and supervisor analyses, respectively.

---

[2] For the purposes of this report, individuals who completed the Employee Questionnaire (i.e., non-supervisory personnel) will be referred to as employees. Those who completed the Supervisor Questionnaire (i.e., supervisory personnel) will be referred to as supervisors.

[3] The nine MACOMs used in stratifying the FY88 survey population were Army Materiel Command (AMC), Forces Command (FORSCOM), Health Services Command (HSC), Military Traffic Management Command (MTMC), Training and Doctrine Command (TRADOC), US Army Corps of Engineers (USACE), US Army Information Systems Command (USAISC), US Army Recruiting Command (USAREC), and US Army, Europe and Seventh Army (USAREUR).

Table 1

Employee Sample Size by Type of Supervisor and Type of Workgroup

		Workgroup			
		Primarily Military	Half Military/ Half Civilian	Primarily Civilian	
Status of Supervisor	Military	452	358	169	979
	Civilian	217	797	3,688	4,702
		669	1,155	3,857	5,681 Total

Table 2
Supervisor Sample Size by Type of Supervisor and Type of Workgroup

		Workgroup			
		Primarily Military	Half Military/ Half Civilian	Primarily Civilian	
Status of Supervisor	Military	118	405	454	977
	Civilian	68	388	1,760	2,216
		186	893	2,214	3,193 Total

Sample. For both employees and supervisors, the demographic analysis covered gender, race, education, pay system, civilian grade, and length of federal civilian service. Employee data also included time supervised by present supervisor. For supervisors, the analyses also included level of supervisor, time supervised Army civilians, training courses completed, number of Army civilians supervised directly, and number of active duty Army military members supervised directly.

The employee dataset was composed of approximately 52% males. The majority of the sample was white (58%) and had at least some college or technical training. The employees with military supervisors were somewhat different from those with civilian supervisors; about 84% of those with military supervisors were General Schedule (GS) employees, with an additional 14% being Wage Grade (WG), whereas about 56% of the employees with civilian supervisors were GS, with an additional 42% being WG. Over half of each group was grade 8 or below, and had been in the federal civilian service less than 10 years. Less than two-thirds (62.7%) of the employees with civilian supervisors had been supervised by their present supervisor two years or less, whereas about 90% of the employees

10

with military supervisors had been supervised by their present supervisor the same amount of time.

In contrast to the employee dataset, the supervisor dataset consisted of approximately 78% males. The majority of the supervisor sample was white (83.3%). Over half (55.3%) of the supervisors with military supervisors had at least a bachelor's degree or equivalent, whereas just less than half (45.4%) of those with civilian supervisors had the same amount of education. Another difference between those who worked with military supervisors and those who worked with civilian supervisors is evident in the pay system of the supervisors; 96.3% of those with military supervisors were GS employees, with only 3.5% being WG, whereas 82.8% of those with civilian supervisors were GS employees, with 17.1% being WG. Approximately three-fourths (75.2%) of those with military supervisors were at grade 11 or above, whereas less than two-thirds (64.2%) of those with civilian supervisors were at the same grade. Half of those with military supervisors were first-level supervisors, whereas two-thirds of those with civilian supervisors were first-level. About 40% of those with military supervisors had been supervising Army civilians more than 10 years. Just over one-fourth (29.6%) of the supervisors with civilian supervisors had been supervising Army civilians more than 10 years. More respondents with military supervisors (as opposed to civilian supervisors) had taken the Personnel Management for Executives course.

Descriptive statistics for the various subsamples in the two datasets are provided in Table 3, for employees, and in Table 4, for supervisors.

Data Analysis Plan

The independent variables used in this study are workgroup and supervisor type. The dependent variables were selected from the FY88 Biennial Survey. They include (1) content-relevant composite variables created by Sadacca et al. (1993), (2) content-relevant single-item variables not included in the Sadacca composites, and (3) single-item variables that, although included in Sadacca composites, might directly influence military-civilian relations. Sadacca and associates had developed their composite variables through an iterative procedure designed to identify reliable composites through a series of factor analyses and determination of Alpha reliabilities. Because of the interest in the nature of specific relationships among variables, many of the individual items are included in the present list of variables because it is believed that analysis of specific individual items will yield more relevant information than will analysis of the more general composite variables.

Employee questionnaire items and composites used as dependent variables in the analysis are listed in Table 5.[4] Supervisor questionnaire items and composites used as dependent variables in the analysis are listed in Table 6. Each of these tables is organized by

---

[4] Throughout the remainder of this report questionnaire items will be referred to by a letter/number combination. For ease of reference, questionnaire items will often be provided in parentheses. Items preceded by an E refer to employee survey items. Items preceded by an S refer to supervisor survey items. Items preceded by SQ refer to supplemental survey items.

11

content area (e.g., Evaluation of Supervisor). Responses to the questionnaire items are on a 5-point scale, ranging from strongly agree (5) to strongly disagree (1).

Table 3

Employee Demographics by Type of Supervisor and Workgroup

	Military Supervisor								Civilian Supervisor							
	Primarily Military Workgroup N %		Military/ Civilian Workgroup N %		Primarily Civilian Workgroup N %		Total N %		Primarily Military Workgroup N %		Military/ Civilian Workgroup N %		Primarily Civilian Workgroup N %		Total N %	
Sex																
Male	205	(45.5)	175	(48.9)	76	(45.0)	456	(46.6)	107	(49.3)	454	(57.4)	1924	(52.4)	2485	(53.1)
Female	246	(54.5)	183	(51.1)	93	(55.0)	522	(53.4)	110	(50.7)	337	(42.6)	1751	(47.6)	2198	(46.9)
Race																
Black, not Hispanic Origin	131	(29.2)	87	(24.4)	45	(27.3)	263	(27.1)	55	(25.8)	244	(31.1)	888	(24.4)	1187	(25.6)
Hispanic	29	(6.5)	33	(9.2)	13	(7.9)	75	(7.7)	19	(8.9)	74	(9.4)	337	(9.2)	430	(9.3)
American Indian or Alaskan Native	5	(1.1)	2	(0.6)	2	(1.2)	9	(0.9)	4	(1.9)	11	(1.4)	63	(1.7)	78	(1.7)
Asian, Pacific Islander	21	(4.7)	22	(6.2)	6	(3.6)	49	(5.1)	16	(7.5)	36	(4.6)	199	(5.2)	241	(5.2)
White, not of Hispanic Origin	262	(58.5)	213	(59.7)	99	(60.0)	574	(59.2)	119	(55.9)	419	(53.4)	2167	(59.5)	2705	(53.8)
Education																
Less than High School Graduate	3	(0.7)	7	(2.0)	4	(2.4)	14	(1.4)	13	(6.1)	46	(5.9)	169	(4.6)	228	(4.9)
High School Graduate or Equivalent	84	(18.7)	72	(20.2)	38	(22.9)	194	(20.0)	62	(29.0)	220	(28.0)	946	(26.0)	1228	(26.5)
Some College or Technical Training	184	(41.0)	121	(34.0)	63	(38.0)	368	(37.9)	72	(33.6)	303	(38.6)	1447	(39.8)	1822	(39.3)
Associate Degree or Equivalent	77	(17.1)	58	(16.3)	21	(12.7)	156	(16.1)	22	(10.3)	83	(10.6)	380	(10.4)	485	(10.5)
Bachelor's Degree or Equivalent	63	(14.0)	56	(15.7)	29	(17.5)	148	(15.2)	30	(14.0)	91	(11.6)	508	(14.0)	629	(13.6)
Advanced Degree	38	(8.5)	42	(11.8)	11	(6.6)	91	(9.4)	15	(7.0)	42	(5.4)	190	(5.2)	247	(5.3)
Pay System																
GS	394	(88.5)	291	(83.1)	129	(76.3)	814	(84.4)	126	(59.4)	438	(56.4)	2020	(55.7)	2584	(56.0)
UG	47	(10.6)	52	(14.9)	34	(20.1)	133	(13.8)	82	(38.7)	309	(39.8)	1530	(42.2)	1921	(41.6)
Wage Leader	4	(0.9)	6	(1.7)	5	(3.0)	15	(1.6)	4	(1.7)	29	(3.7)	75	(2.1)	108	(2.3)
UA	0	(0.0)	1	(0.3)	1	(0.6)	2	(0.2)	0	(0.0)	0	(0.0)	1	(0.0)	1	(0.0)
Prevailing Rate	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	3	(0.1)	3	(0.1)
Civilian Grade																
1 or 2	2	(0.4)	11	(3.1)	5	(3.0)	18	(1.8)	14	(6.5)	42	(5.3)	49	(1.3)	105	(2.2)
3 or 4	104	(23.1)	53	(14.8)	30	(18.0)	187	(19.2)	40	(18.5)	138	(17.4)	505	(13.8)	683	(14.6)
5 or 6	150	(33.3)	110	(30.8)	43	(25.7)	303	(31.1)	64	(29.6)	229	(28.9)	1004	(27.4)	1297	(27.7)
7 or 8	74	(16.4)	51	(14.3)	20	(12.0)	145	(14.9)	33	(15.3)	118	(14.9)	603	(16.4)	754	(16.1)
9 or 10	25	(5.6)	34	(9.5)	22	(13.2)	81	(8.3)	42	(19.4)	113	(14.2)	626	(17.1)	781	(16.7)
11 or 12	83	(18.4)	78	(21.8)	33	(19.8)	194	(19.9)	17	(7.9)	131	(16.5)	722	(19.7)	870	(18.6)
13 or 14	10	(2.2)	18	(5.0)	12	(7.2)	40	(4.1)	5	(2.3)	20	(2.5)	110	(3.0)	135	(2.9)
Above 14	2	(0.4)	0	(0.0)	2	(1.2)	4	(0.4)	0	(0.0)	0	(0.0)	9	(0.2)	9	(0.2)
Other	0	(0.0)	2	(0.6)	0	(0.0)	2	(0.2)	1	(0.5)	2	(0.3)	41	(1.1)	44	(0.9)

(Continued)

13

Table 3 (Continued)

Employee Demographics by Type of Supervisor and Workgroup

	Military Supervisor				Civilian Supervisor			
	Primarily Military Workgroup N %	Military/ Civilian Workgroup N %	Primarily Civilian Workgroup N %	Total N %	Primarily Military Workgroup N %	Military/ Civilian Workgroup N %	Primarily Civilian Workgroup N %	Total N %
Length of Federal Civilian Service								
Less than 1 year	15 (3.3)	12 (3.4)	8 (4.7)	35 (3.6)	8 (3.7)	25 (3.1)	80 (2.2)	113 (2.4)
1 thru 5 years	166 (32.5)	118 (33.0)	48 (28.4)	312 (32.0)	73 (33.8)	201 (25.3)	799 (21.7)	1073 (22.9)
6 thru 10 years	86 (19.2)	64 (17.9)	38 (22.5)	188 (19.3)	55 (25.5)	182 (22.9)	934 (25.4)	1171 (25.0)
11 thru 15 years	83 (18.5)	54 (15.1)	25 (14.8)	162 (16.6)	46 (21.3)	142 (17.8)	729 (19.8)	917 (19.5)
16 thru 20 years	48 (10.7)	41 (11.5)	19 (11.2)	108 (11.1)	12 (5.6)	98 (12.3)	466 (12.7)	576 (12.3)
21 thru 25 years	39 (8.7)	39 (10.9)	16 (9.5)	94 (9.6)	16 (7.4)	84 (10.6)	370 (10.1)	470 (10.0)
26 thru 30 years	20 (4.5)	14 (3.9)	6 (3.6)	40 (4.1)	3 (1.4)	35 (4.4)	164 (4.5)	202 (4.3)
More than 30 years	12 (2.7)	16 (4.5)	9 (5.3)	37 (3.8)	3 (1.4)	29 (3.6)	139 (3.8)	171 (3.6)
Time Supervised by Present Supervisor								
Less than 1 year	234 (52.0)	167 (46.6)	79 (46.7)	480 (49.1)	66 (30.8)	230 (29.1)	1093 (29.7)	1389 (29.7)
1 thru 2 years	181 (40.2)	145 (40.5)	75 (44.4)	401 (41.0)	73 (34.1)	270 (34.1)	1201 (32.7)	1544 (33.0)
3 thru 5 years	33 (7.3)	40 (11.2)	14 (8.3)	87 (8.9)	54 (25.2)	202 (25.5)	937 (25.5)	1193 (25.5)
6 thru 10 years	2 (0.4)	5 (1.4)	1 (0.6)	8 (0.8)	15 (7.0)	74 (9.4)	338 (9.2)	427 (9.1)
More than 10 years	0 (0.0)	1 (0.3)	0 (0.0)	1 (0.1)	6 (2.8)	15 (1.9)	105 (2.9)	126 (2.7)

Table 4

Supervisor Demographics by Type of Supervisor and Workgroup

	Military Supervisor								Civilian Supervisor							
	Primarily Military Workgroup		Military/ Civilian Workgroup		Primarily Civilian Workgroup		Total		Primarily Military Workgroup		Military/ Civilian Workgroup		Primarily Civilian Workgroup		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Sex																
Male	73	(62.4)	303	(75.8)	339	(76.9)	715	(74.6)	53	(80.3)	280	(74.9)	1341	(78.3)	1674	(77.8)
Female	44	(37.6)	97	(24.3)	102	(23.1)	243	(25.4)	13	(19.7)	94	(25.1)	372	(21.7)	479	(22.2)
Race																
Black, not Hispanic Origin	12	(10.2)	36	(8.9)	35	(7.8)	83	(8.5)	7	(10.3)	48	(12.4)	158	(9.0)	213	(9.6)
Hispanic	5	(4.2)	17	(4.2)	19	(4.2)	41	(4.2)	2	(2.9)	15	(3.9)	51	(2.9)	68	(3.1)
American Indian or Alaskan Native	3	(2.5)	0	(0.0)	3	(0.7)	6	(0.6)	1	(1.5)	7	(1.8)	24	(1.4)	32	(1.4)
Asian, Pacific Islander	8	(6.8)	7	(1.7)	18	(4.0)	33	(3.4)	1	(1.5)	13	(3.4)	43	(2.5)	57	(2.6)
White, not of Hispanic Origin	90	(76.3)	345	(85.2)	376	(83.4)	811	(83.3)	57	(83.8)	305	(78.6)	1479	(84.3)	1841	(83.3)
Education																
Less than High School Graduate	0	(0.0)	0	(0.0)	1	(0.2)	1	(0.1)	0	(0.0)	9	(2.3)	35	(2.0)	44	(2.0)
High School Graduate	14	(11.9)	44	(10.9)	41	(9.1)	99	(10.1)	7	(10.3)	51	(13.2)	278	(15.9)	336	(15.3)
Some College or Technical Training	32	(27.1)	87	(21.5)	106	(23.4)	225	(23.1)	32	(47.1)	113	(29.3)	480	(27.5)	625	(28.4)
Associate Degree or Equivalent	14	(11.9)	50	(12.3)	47	(10.4)	111	(11.4)	7	(10.3)	43	(11.1)	145	(8.3)	195	(8.9)
Bachelor's Degree or Equivalent	35	(29.7)	125	(30.9)	141	(31.1)	301	(30.8)	7	(10.3)	94	(24.4)	510	(29.2)	611	(27.8)
Advanced Degree	23	(19.5)	99	(24.4)	117	(25.8)	239	(24.5)	15	(22.1)	76	(19.7)	297	(17.0)	388	(17.6)
Pay System																
GS	117	(100.0)	388	(96.5)	432	(95.2)	937	(96.3)	63	(92.6)	339	(88.1)	1422	(81.3)	1824	(82.6)
WG	0	(0.0)	12	(3.0)	22	(4.8)	34	(3.5)	5	(7.4)	46	(11.9)	325	(18.6)	376	(17.1)
Wage Leader	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
UA	0	(0.0)	2	(0.5)	0	(0.0)	2	(0.2)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Prevailing Rate	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	3	(0.2)	3	(0.1)
Civilian Grade																
1 or 2	0	(0.0)	1	(0.2)	1	(0.2)	2	(0.2)	0	(0.0)	0	(0.0)	3	(0.2)	3	(0.1)
3 or 4	0	(0.0)	4	(1.0)	4	(0.9)	8	(0.8)	0	(0.0)	9	(2.3)	25	(1.4)	34	(1.5)
5 or 6	12	(10.2)	24	(6.0)	18	(4.0)	54	(5.5)	8	(11.8)	27	(7.0)	112	(6.4)	147	(6.7)
7 or 8	14	(11.9)	37	(9.2)	25	(5.5)	76	(7.8)	10	(14.7)	54	(14.0)	196	(11.2)	260	(11.8)
9 or 10	20	(16.9)	52	(12.9)	30	(6.6)	102	(10.5)	12	(17.6)	68	(17.6)	265	(15.2)	345	(15.7)
11 or 12	50	(42.4)	147	(36.5)	147	(32.4)	344	(35.3)	32	(47.1)	163	(37.0)	584	(33.4)	759	(34.5)
13 or 14	19	(16.1)	114	(28.3)	178	(39.2)	311	(31.9)	5	(7.4)	82	(21.2)	487	(27.9)	574	(26.1)
Above 14	3	(2.5)	24	(6.0)	51	(11.2)	78	(8.0)	0	(0.0)	3	(0.8)	71	(4.1)	74	(3.4)
Other	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(1.5)	0	(0.0)	4	(0.2)	5	(0.2)
Level of Supervisor																
First Line	76	(66.7)	222	(56.1)	183	(40.6)	481	(50.1)	42	(63.6)	263	(69.6)	1145	(66.8)	1450	(67.2)
Second Line	29	(25.4)	108	(27.3)	152	(33.7)	289	(30.1)	19	(28.8)	94	(24.9)	446	(26.0)	559	(25.9)
Above Second Line	9	(7.9)	66	(16.7)	116	(25.7)	191	(19.9)	5	(7.6)	21	(5.6)	122	(7.1)	148	(6.9)

15

Table 4

Supervisor Demographics by Type of Supervisor and Workgroup (Continued)

| | Military Supervisor | | | | | | | | Civilian Supervisor | | | | | | | |
| | Primarily Military Workgroup | | Military/ Civilian Workgroup | | Primarily Civilian Workgroup | | Total | | Primarily Military Workgroup | | Military/ Civilian Workgroup | | Primarily Civilian Workgroup | | Total | |
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Time Supervised Army Civilians																
Less than 1 year	9	(8.0)	20	(5.0)	24	(5.4)	53	(5.5)	5	(7.6)	33	(8.8)	145	(8.5)	183	(8.5)
1 thru 2 years	16	(14.3)	46	(11.5)	56	(12.6)	118	(12.3)	9	(13.6)	49	(13.1)	242	(14.2)	300	(14.0)
3 thru 5 years	31	(27.7)	88	(22.1)	98	(22.0)	217	(22.7)	25	(37.9)	103	(27.5)	413	(24.2)	541	(25.2)
6 thru 10 years	21	(18.8)	75	(18.8)	77	(17.3)	173	(18.1)	11	(16.7)	76	(20.3)	402	(23.5)	499	(22.7)
More than 10 years	35	(31.3)	170	(42.6)	190	(42.7)	395	(41.3)	16	(24.2)	113	(30.2)	508	(29.7)	637	(29.6)
Length of Federal Civilian Service																
Less than 1 year	2	(1.7)	4	(1.0)	4	(0.9)	10	(1.0)	0	(0.0)	4	(1.0)	9	(0.5)	13	(0.6)
1 thru 5 years	15	(12.7)	47	(11.6)	36	(7.9)	98	(10.0)	12	(17.6)	40	(10.3)	101	(5.8)	153	(6.9)
6 thru 10 years	21	(17.8)	42	(10.4)	45	(9.9)	108	(11.1)	12	(17.6)	65	(16.8)	186	(10.6)	263	(11.9)
11 thru 15 years	25	(21.2)	79	(19.5)	78	(17.2)	182	(18.6)	13	(19.1)	73	(18.8)	304	(17.3)	390	(17.6)
16 thru 20 years	19	(16.1)	68	(16.8)	82	(18.1)	169	(17.3)	15	(22.1)	72	(18.6)	328	(18.7)	415	(18.8)
21 thru 25 years	18	(15.3)	78	(19.3)	83	(18.3)	179	(18.3)	7	(10.3)	55	(14.2)	381	(21.7)	443	(20.0)
26 thru 30 years	9	(7.6)	43	(10.6)	59	(13.0)	111	(11.4)	4	(5.9)	40	(10.3)	225	(12.8)	269	(12.2)
More than 30 years	9	(7.6)	44	(10.9)	67	(14.8)	120	(12.3)	5	(7.4)	39	(10.1)	220	(12.5)	264	(11.9)
Training Courses Completed																
Basic Civilian Supervisory Course	89	(75.4)	340	(84.0)	386	(85.0)	815	(83.4)	53	(77.9)	317	(81.7)	1493	(84.8)	1863	(84.1)
Middle Management Workshop	33	(28.0)	162	(40.0)	210	(46.3)	405	(41.5)	21	(30.9)	130	(33.5)	630	(35.8)	781	(35.2)
Personnel Management for Executives	15	(12.7)	112	(27.7)	155	(34.1)	282	(28.9)	5	(7.4)	56	(14.4)	329	(18.7)	390	(17.6)
Number of Army Civilians Supervised Directly																
None	13	(12.3)	3	(0.8)	7	(1.6)	23	(2.5)	7	(11.7)	13	(3.7)	50	(3.1)	70	(3.4)
1 or 2	38	(35.8)	43	(11.2)	28	(6.5)	109	(11.8)	15	(25.0)	40	(11.5)	82	(5.0)	137	(6.7)
3 thru 7	49	(46.2)	234	(61.1)	230	(53.0)	513	(55.6)	28	(46.7)	174	(49.9)	710	(43.3)	912	(44.6)
8 thru 10	3	(2.8)	57	(14.9)	83	(19.1)	143	(15.5)	3	(5.0)	51	(14.6)	297	(18.1)	351	(17.1)
11 thru 15	1	(0.9)	25	(6.5)	45	(10.4)	71	(7.7)	5	(8.3)	34	(9.7)	228	(13.9)	267	(13.0)
16 thru 20	0	(0.0)	12	(3.1)	10	(2.3)	22	(2.4)	2	(3.3)	14	(4.0)	114	(7.0)	130	(6.4)
21 thru 25	0	(0.0)	0	(0.0)	8	(1.8)	8	(0.9)	0	(0.0)	12	(3.4)	55	(3.4)	67	(3.3)
26 or more	2	(1.9)	1	(0.3)	23	(5.3)	34	(3.7)	0	(0.0)	11	(3.2)	102	(6.2)	113	(5.5)
Number of Active Duty Army Military Members Supervised Directly																
None	33	(31.1)	155	(40.4)	278	(64.4)	466	(50.5)	26	(41.9)	198	(56.7)	1397	(85.3)	1621	(79.1)
1 or 2	19	(17.9)	113	(29.4)	114	(26.4)	246	(26.7)	7	(11.3)	57	(16.3)	176	(10.7)	240	(11.7)
3 thru 7	41	(38.7)	94	(24.5)	34	(7.9)	169	(18.3)	14	(22.6)	62	(17.8)	56	(3.4)	132	(6.4)
8 thru 10	6	(5.7)	11	(2.9)	1	(0.2)	21	(2.3)	4	(6.5)	15	(4.3)	5	(0.3)	24	(1.2)
11 thru 15	5	(4.7)	5	(1.3)	1	(0.2)	11	(1.2)	1	(1.6)	8	(2.3)	2	(0.1)	11	(0.5)
16 thru 20	1	(0.9)	3	(0.8)	0	(0.0)	4	(0.4)	4	(6.5)	3	(0.9)	1	(0.1)	8	(0.4)
21 thru 25	0	(0.0)	2	(0.5)	0	(0.0)	2	(0.2)	1	(1.6)	2	(0.6)	1	(0.1)	4	(0.2)
26 or more	1	(0.9)	1	(0.3)	1	(0.2)	3	(0.3)	5	(8.1)	4	(1.1)	0	(0.0)	9	(0.4)

Table 5

Questionnaire Items and Composites Included in the Employee Analysis

Item No.   Abbreviated Item Content

Evaluation of Supervisor

E40   Supervisor has clearly outlined goals/priorities for my work
E43   Supervisor lets me know how well I am doing my work
E44   Supervisor encourages ideas/suggestions about better ways to do the work
E47   All in all, I have a good supervisor
E48   Supervisor gives me support/backing I need to do my job well
SQ18   Supervisor has strong interest in welfare of his/her employees
SQ19   Supervisor is competent technically
SQ20   Supervisor is competent in people-skills

Perceived Supervisor Support for Training

SQ8   Supervisor helps me get the experience/training I need
SQ9   Supervisor and I discuss training/development needs at least once yearly
SQ10   I have a written individual development plan (IDP)
SQ11   During the last year, I got the training indicated on my IDP

Knowledge and Use of Performance Appraisals

E6   My annual performance appraisal has been helpful to me
SQ6   I understand how the performance appraisal system works
SQ7   I helped develop my performance standards
SQ14   My performance standards helped me understand what is expected of me on my job
SQ15   If I disagree with my performance standards, nothing I can do

Cooperation and Efficiency of Workgroups

E34   The people I work with generally do a good job
E36   All in all, my work group is well run
E39   People in my unit work well together
SQ30   Work groups cooperate with each other

Civilians are Important to Management

E56   Top management is concerned about civilian employees
E64   There is a good working relationship between civilian and military personnel at this installation
SQ37   Civilians are made to feel that they are an important part of the Army team

General Satisfaction

ECOMP1 Evaluation of management
ECOMP2 Job satisfaction
ECOMP10   Recommends employer similar to own

Table 6

Questionnaire Items and Composites Included in the Supervisor Analysis

Item No.   Abbreviated Item Content

Evaluation of Supervisor

S29   I feel free to go to my supervisor with work questions/problems
S54   Supervisor keeps me informed about matters affecting my job/me
SQ18   Supervisor has strong interest in welfare of his/her employees
SQ19   Supervisor is competent technically
SQ20   Supervisor is competent in people-skills

Perceived Supervisor Support for Training

SQ8   Supervisor helps me get the experience/training I need
SQ9   Supervisor and I discuss training/development needs at least once yearly
SQ10   I have a written individual development plan (IDP)
SQ11   During the last year, I got the training indicated on my IDP

Knowledge and Use of Performance Appraisals

S3   Performance appraisal system helps improve employee performance
SQ6   I understand how the performance appraisal system works
SQ7   I helped develop my performance standards
SQ14   My performance standards helped me understand what is expected of me on my job
SQ15   If I disagree with my performance standards, nothing I can do
SQ38   I consider organizational goals/objectives when developing performance standards for my employees
SQ39   My employees participate in developing performance standards for their jobs
SQ40   I discuss performance standards with my employees at the beginning of their rating periods
SQ41   I counsel employees immediately when they perform poorly

Cooperation and Efficiency of Workgroups

S48   Superiors understand my work unit's capabilities/limitations
SQ30   Work groups cooperate with each other

Civilians are Important to Management

S21   Top management is concerned about civilian employees
S32   At this installation, good working relationship between military and civilian personnel
SQ37   Civilians are made to feel that they are an important part of the Army team

19

Table 6 (Continued)

Questionnaire Items and Composites Included in the Supervisor Analysis

Item No.	Abbreviated Item Content

General Satisfaction

SCOMP1	Evaluation of Management
SCOMP2	Job satisfaction
SCOMP10	Recommends employer similar to own
S12	Most of my subordinates like working here
S59	Most people who work for me are satisfied with their jobs
S19	The work I supervise is important to the mission of the Army
S45	I plan to remain with the Army until I retire

A two-stage data analysis process was used to investigate the relationships between the independent and dependent variables. The first stage involves a series of two-way ANOVAs to determine if there are differences in the dependent variables that can be attributed to the different ANOVA treatment effects.

The ANOVAs revealed whether the factors of supervisor type (civilian or military) and workgroup composition (primarily military, military/civilian, primarily civilian) have independent and/or interactive effects on a variety of dependent variables. The statistical analysis package SAS PROC GLM was used to run 2 (supervisor type) x 3 (workgroup composition) ANOVAs that accounted for unequal group sizes. Post hoc analyses of significant effects utilized the Scheffe, a conservative statistic commonly used for unequal group sizes.

We followed up on the significant ANOVA results with regression analyses to control for unwanted sources of variation and to determine the magnitude of the effects of interest. Hierarchical multiple regression analyses were performed on variables with significant ANOVAs. The purpose of these analyses was to assess the strength of the relationship of the dependent variable with supervisor type or workgroup composition after accounting for the effects of various demographic factors (e.g., gender, race, grade level, length of service, education).

In step one, the demographic variables were entered into the regression equation to remove their effect on the dependent variable. In step two, the main effects for supervisor type and workgroup composition were entered into the equation. In the third step, the interaction between supervisor type and workgroup composition were included in the equation.

The presentation of the results of the ANOVA and regression analyses in the following section will be organized by the six content areas. Because a linkage cannot be made between the employees and the supervisors in the two datasets, the employee and supervisor findings will be discussed separately in each subject area.

Analyses of Variance

As previously discussed, the ANOVAs were designed to show whether the factors of supervisor type (civilian or military) and workgroup composition (primarily military, military/civilian, primarily civilian) had independent and/or interactive effects on a variety of dependent variables. The statistical analysis package SAS PROC GLM was used to run 2 (supervisor type) x 3 (workgroup composition) ANOVAs that account for unequal group sizes. Post hoc analyses of significant effects utilized the Scheffe.

Differences between subgroups based on supervisor type or workgroup composition, as indicated by ANOVA results, are discussed under the six content areas. In each case, a general statement about the content area results is followed by separate presentations of the significant results for the employee and supervisor datasets. ANOVA statistics are presented in Appendix B.

Evaluation of supervisor. In general, civilian supervisors were rated less favorably by their employees than were military supervisors (E47). This trend was especially evident in mixed or primarily civilian workgroups, but was often reversed in primarily military workgroups.

The primary findings for the employee dataset on evaluation of supervisors are presented below. ANOVAs on the supervisor dataset showed no significant differences.

Employee results. Civilian supervisors were viewed as less likely to provide employees with support and backing to do their jobs (E48), and less competent in people-skills (SQ20) than military supervisors. These effects held for mixed and primarily civilian workgroups but the relationships were reversed for primarily military workgroups (E47, E48, SQ20). In other words, in primarily military workgroups, civilian supervisors were rated more favorably than military supervisors.

Within mixed and primarily civilian workgroups, civilian supervisors were seen as being less interested in employees' welfare than were military supervisors (SQ18). This relationship was reversed within the primarily military workgroup, with employees perceiving their civilian supervisor as having a stronger interest in employee welfare than those in a similar type of workgroup having a military supervisor.

As workgroups became more civilian in composition, employees with military supervisors felt more encouragement about their ideas to improve work methods whereas employees with civilian supervisors felt less encouragement (E44).

21

Significant results of the employee Evaluation of Supervisor ANOVAs are shown in Table 7.

Table 7

Employee ANOVA Results: Evaluation of Supervisor

E44   My supervisor encourages ideas an suggestions about better ways to do work.

	Primarily Military Workgroup	Military/ Civilian Workgroup	Primarily Civilian Workgroup	
Military	3.25 (448)	3.40 (356)	3.54 (169)	3.36 (973)
				n.s.
Civilian	3.40 (215)	3.32 (786)	3.22 (3659)	3.25 (4660)
	3.30 (663)	3.34 (1142)	3.23 (3828)	3.26 (5633)
		n.s.		.01*

E47   All in all, I have a good supervisor.

	Primarily Military Workgroup	Military/ Civilian Workgroup	Primarily Civilian Workgroup	
Military	3.58 (443)	3.83 (355)	3.83 (166)	3.72 (964)
				.05
Civilian	3.69 (211)	3.69 (781)	3.54 (3635)	3.57 (4627)
	3.62 (654)	3.73 (1136)	3.55 (3801)	3.60 (5591)
		n.s.		.01

* Denotes a significance of interaction.

(Continued)

Table 7 (Continued)

E48   My supervisor gives me the support and backing I need to do my job well.

	Primarily Military Workgroup	Military/ Civilian Workgroup	Primarily Civilian Workgroup		
Military	3.44 (449)	3.75 (356)	3.77 (168)	3.61 (973)	
					.01
Civilian	3.57 (214)	3.55 (789)	3.43 (3666)	3.46 (4669)	
	3.48 (663)	3.61 (1145)	3.44 (3834)	3.48 (5642)	
		n.s.			.01

SQ18 My supervisor has a strong interest in the welfare of his/her employees.

	Primarily Military Workgroup	Military/ Civilian Workgroup	Primarily Civilian Workgroup		
Military	3.17 (450)	3.45 (357)	3.48 (168)	3.33 (975)	
					n.s.
Civilian	3.30 (217)	3.31 (790)	3.21 (3664)	3.23 (4671)	
	3.21 (667)	3.35 (1147)	3.22 (3832)	3.25 (5646)	
		n.s.			.01

(Continued)

23

Table 7 (Continued)

SQ20 My supervisor is competent in handling the people-skills part of his/her job.

	Primarily Military Workgroup	Military/ Civilian Workgroup	Primarily Civilian Workgroup	
Military	3.27 (448)	3.54 (356)	3.52 (168)	3.33 (972)
				.01
Civilian	3.32 (215)	3.35 (786)	3.23 (3666)	3.25 (4667)
	3.29 (663)	3.41 (1142)	3.24 (3834)	3.28 (5639)
		n.s.		.05

Perceived supervisor support for training. Among employees, mixed workgroups perceived more favorable supervisor support for training than did workgroups that were primarily military. Among supervisors, individuals in primarily civilian workgroups were more likely to report favorable supervisor support for training than were those in primarily military workgroups; individuals with civilian supervisors were more likely to report favorable supervisor support for training than were those with military supervisors.

The primary findings for the employee and supervisor datasets regarding perceived supervisor support for training are presented below.

Employee results. Employees in mixed workgroups discussed their training and development needs with their supervisors significantly more often than did those in primarily military workgroups (SQ9). They were also more likely to get the training indicated on their IDP than were employees in primarily military workgroups (SQ11).

Significant results of the employee Perceived Supervisor Support for Training ANOVAs are shown in Table 8.

Supervisor results. Civilian supervisors were more likely to discuss training and development needs with their subordinate supervisors than were military supervisors (SQ9).

Supervisors in primarily civilian workgroups reported greater training support (SQ8) and were more likely to get training indicated on their IDP (SQ11) than were those in primarily military workgroups. Supervisors in mixed or primarily civilian workgroups were more likely to have IDPs than those in primarily military workgroups (SQ10).

24

Table 8

Employee ANOVA Results: Perceived Supervisor Support for Training

SQ9   My supervisor and I discuss my training and development needs at least once yearly.

	Primarily Military Workgroup	Military/ Civilian Workgroup	Primarily Civilian Workgroup	
Military	2.83 (448)	3.03 (357)	3.04 (167)	2.94 (972)
				n.s.
Civilian	2.97 (217)	3.09 (791)	2.98 (3666)	3.00 (4674)
	2.88 (665)	3.07 (1148)	2.93 (3833)	2.99 (5646)
		.05		n.s.

SQ11 During the last year, I got the training indicated on my IDP.

	Primarily Military Workgroup	Military/ Civilian Workgroup	Primarily Civilian Workgroup	
Military	2.37 (441)	2.60 (351)	2.62 (165)	2.50 (957)
				n.s.
Civilian	2.47 (212)	2.53 (777)	2.46 (3583)	2.47 (4572)
	2.40 (653)	2.55 (1128)	3.47 (3748)	2.48 (5529)
		.05		n.s.

Significant results of Perceived Supervisor Support for Training are shown in Table 9.

Table 9

Supervisor ANOVA Results: Perceived Supervisor Support for Training

SQ8   My supervisor helps me get the experience and training I need.

	Primarily Military Workgroup	Military/ Civilian Workgroup	Primarily Civilian Workgroup	
Military	3.25 (118)	3.53 (405)	3.49 (454)	3.48 (977)
				n.s.
Civilian	3.35 (68)	3.38 (386)	3.54 (1753)	3.51 (2207)
	3.29 (186)	3.46 (791)	3.53 (2207)	3.50 (3184)
		.05		n.s.

SQ9   My supervisor and I discuss my training and development needs at least once yearly.

	Primarily Military Workgroup	Military/ Civilian Workgroup	Primarily Civilian Workgroup	
Military	2.98 (118)	3.26 (402)	3.26 (454)	3.23 (974)
				.01
Civilian	3.44 (68)	3.30 (388)	3.33 (1754)	3.33 (2210)
	3.15 (186)	3.28 (790)	3.32 (2208)	3.30 (3184)
		.05		n.s.

(Continued)

26

Table 9 (Continued)

SQ10 I have a written individual development plan (IDP).

	Primarily Military Workgroup	Military/ Civilian Workgroup	Primarily Civilian Workgroup	
Military	2.78 (118)	3.20 (404)	3.31 (453)	3.20 (975)
				n.s.
Civilian	3.16 (68)	3.24 (386)	3.25 (1747)	3.25 (2201)
	2.92 (186)	3.22 (790)	3.26 (2200)	3.23 (3176)
		.01		n.s.

SQ11 During the last year, I got the training indicated on my IDP.

	Primarily Military Workgroup	Military/ Civilian Workgroup	Primarily Civilian Workgroup	
Military	2.56 (117)	2.74 (401)	2.82 (450)	2.76 (968)
				n.s.
Civilian	2.60 (68)	2.68 (385)	2.81 (1733)	2.78 (2186)
	2.57 (185)	2.71 (786)	2.81 (2183)	2.77 (3154)
		n.s.		n.s.

Knowledge and use of performance appraisal procedures. In general, employees with civilian supervisors rated their supervisors less favorably on knowledge and use of performance appraisal procedures than did employees with military supervisors. Employees in primarily civilian workgroups tended to be less involved in the development of their performance standards, and found their performance appraisals less helpful in their understanding of what is expected of them in their jobs than did employees in mixed or primarily military workgroups.

27

This trend also appears for supervisors. In other words, supervisors who had civilian supervisors tended to rate them less favorably on knowledge and use of performance appraisal procedures than did those with military supervisors. These trends were strongest in primarily civilian workgroups.

The primary findings for the employee and supervisor datasets regarding knowledge and use of performance appraisal procedures are presented below.

Employee results. Employees with civilian supervisors rated their annual performance appraisals as less helpful than did those with military supervisors (E6). They felt they had less of an understanding of how the performance appraisal system works (SQ6), their supervisors involved them less often in developing their own performance standards (SQ7), and they felt less able to do something about changing their performance standards than did employees with military supervisors (SQ15).

Employees in primarily civilian workgroups rated their annual performance appraisals as less helpful than did those in either mixed or primarily military workgroups (E6). They were less likely to develop their own performance standards (SQ7), and felt that their performance standards were less helpful in their understanding of what is expected of them in their jobs than did employees of either mixed or primarily military workgroups (SQ14).

Significant results of the employee Knowledge and Use of Performance Appraisal Procedures are shown in Table 10.

Table 10

Employee ANOVA Results: Knowledge and Use of Performance Appraisals

E6   My annual performance appraisal has usually been helpful to me.

	Primarily Military Workgroup	Military/ Civilian Workgroup	Primarily Civilian Workgroup		
Military	3.40 (447)	2.45 (355)	3.34 (166)	3.41 (968)	
					.01
Civilian	3.27 (213)	3.36 (782)	3.12 (3657)	3.20 (4652)	
	3.36 (660)	3.54 (1137)	3.13 (3823)	3.21 (5620)	
		.01		n.s.	

(Continued)

28

Table 10 (Continued)

Employee ANOVA Results: Knowledge and Use of Performance Appraisals

SQ6   I understand how the performance appraisal system works.

	Primarily Military Workgroup	Military/ Civilian Workgroup	Primarily Civilian Workgroup	
Military	3.69 (446)	3.74 (344)	3.68 (167)	3.71 (957)
				.01
Civilian	3.55 (214)	3.61 (775)	3.60 (3593)	3.60 (4582)
	3.64 (660)	3.65 (1119)	3.60 (3760)	3.62 (5539)
		n.s.		n.s.

SQ7 I helped develop my performance standards.

	Primarily Military Workgroup	Military/ Civilian Workgroup	Primarily Civilian Workgroup	
Military	3.30 (445)	3.28 (356)	3.13 (168)	3.26 (969)
				.01
Civilian	3.17 (216)	3.18 (782)	2.87 (3633)	2.94 (4631)
	3.26 (661)	3.21 (1138)	2.88 (3801)	2.99 (5600)
		.001		n.s.

(Continued)

Table 10 (Continued)

Employee ANOVA Results: Knowledge and Use of Performance Appraisals

SQ14 My performance standards helped me understand what is expected of me on my job.

	Primarily Military Workgroup	Military/ Civilian Workgroup	Primarily Civilian Workgroup	
Military	3.80 (448)	3.87 (357)	3.73 (169)	3.91 (975)
				.001
Civilian	3.74 (217)	3.82 (787)	3.68 (3671)	3.45 (2201)
	3.78 (665)	3.84 (1144)	3.68 (3840)	3.59 (3176)
		n.s.		n.s.

SQ15 If I disagree with my performance standards, there is nothing I can do.

	Primarily Military Workgroup	Military/ Civilian Workgroup	Primarily Civilian Workgroup	
Military	3.30 (450)	3.45 (352)	3.50 (167)	3.39 (969)
				.001
Civilian	3.20 (215)	3.28 (785)	3.15 (3663)	3.17 (4663)
	3.27 (665)	3.33 (1137)	3.17 (3830)	3.21 (5632)
		n.s.		n.s.

Supervisor results. Supervisors were less likely to assist in developing their performance standards if they had civilian rather than military supervisors (SQ7). They were also less likely to have their employees participate in developing performance standards (SQ39) or to consider organizational goals and objectives when developing performance standards for employees (SQ38). This latter relationship was especially evident in primarily civilian workgroups (SQ38).

In primarily civilian workgroups, supervisors with civilian supervisors were less likely to discuss performance standards with employees at the beginning of their rating period (SQ40), have their employees participate in developing performance standards for their jobs (SQ39), and counsel employees immediately when they performed poorly (SQ41) than was the case in other supervisor-workgroup combinations (SQ40).

In primarily military and mixed workgroups, supervisors with civilian supervisors were more likely to counsel employees immediately when they performed poorly than were supervisors with military supervisors. In primarily civilian workgroups, on the other hand, supervisors with civilian supervisors were less likely to counsel immediately than were supervisors with military supervisors (SQ41).

Significant results of the supervisor Knowledge and Use of Performance Appraisal Procedures are shown in Table 11.

Table 11

Supervisor ANOVA Results: Knowledge and Use of Performance Appraisals

SQ7   I helped develop my performance standards.

	Primarily Military Workgroup	Military/ Civilian Workgroup	Primarily Civilian Workgroup	
Military	3.77 (117)	4.00 (405)	3.86 (453)	3.39 (969)
				.001
Civilian	3.63 (67)	3.53 (785)	3.43 (1748)	3.17 (4663)
	3.72 (184)	3.77 (791)	3.10 (2501)	3.21 (5632)
		n.s.		n.s.

(Continued)

Table 11 (Continued)

Supervisor ANOVA Results: Knowledge and Use of Performance Appraisals

SQ38 I consider organizational goals and objectives when developing performance standards for my employees.

	Primarily Military Workgroup	Military/ Civilian Workgroup	Primarily Civilian Workgroup		
Military	4.26 (104)	4.32 (383)	4.32 (435)	4.31 (922)	
					.01
Civilian	4.19 (62)	4.28 (355)	4.15 (1642)	4.17 (2059)	
	4.23 (166)	4.30 (738)	4.19 (2077)	4.22 (2981)	
		.05		.05	

SQ39 My employees participate in developing performance standards for their jobs.

	Primarily Military Workgroup	Military/ Civilian Workgroup	Primarily Civilian Workgroup		
Military	4.22 (103)	4.23 (383)	4.12 (435)	4.18 (922)	
					.001
Civilian	3.95 (62)	3.96 (354)	3.84 (1642)	3.86 (2058)	
	4.12 (165)	4.10 (738)	3.90 (2077)	3.96 (2980)	
		.01		n.s.	

(Continued)

Table 11 (Continued)

Supervisor ANOVA Results: Knowledge and Use of Performance Appraisals

SQ40   I discuss performance standards with my employees at the beginning of their rating periods.

	Primarily Military Workgroup	Military/ Civilian Workgroup	Primarily Civilian Workgroup		
Military	4.23 (103)	4.26 (383)	4.29 (435)	4.18 (921)	
					n.s.
Civilian	4.19 (62)	4.27 (357)	4.11 (1643)	4.14 (2062)	
	4.21 (165)	4.26 (740)	4.15 (2078)	4.18 (2983)	
		n.s.		.01	

SQ41   I counsel employees immediately when they perform poorly.

	Primarily Military Workgroup	Military/ Civilian Workgroup	Primarily Civilian Workgroup		
Military	4.06 (104)	4.09 (386)	4.08 (436)	4.08 (926)	
					n.s.
Civilian	4.16 (62)	4.11 (355)	3.93 (1647)	3.97 (2064)	
	4.10 (166)	4.10 (741)	3.96 (2083)	4.00 (2990)	
		.01		.01	

Cooperation and efficiency of workgroups. In general, employees with civilian supervisors felt less positively about the cooperation and efficiency of their workgroups than did employees with military supervisors. Analysis of workgroup type indicates employees in mixed workgroups tended to feel more positively about the cooperation and efficiency of their workgroup than did those employees in primarily military workgroups. Interactions between supervisor type and workgroup composition tended to highlight employees with civilian supervisors in primarily military workgroups as least likely to perceive cooperation and efficiency of workgroups.

The primary findings for the employee dataset regarding cooperation and efficiency of workgroups are presented below. ANOVAs on the supervisor dataset showed no significant differences.

Employee results. Employees with civilian supervisors felt less positively about the way their workgroups were run (E36), and felt that their units work less well together (E39) than did employees with military supervisors.

Differences by workgroup type were more complex. Employees in mixed workgroups felt more positively about the way their workgroup was run than did employees of either primarily military or primarily civilian workgroups (E36). In addition, they felt more strongly that their co-workers do a good job than did members of primarily military workgroups (E34). Although workgroup types showed no specific mean differences in terms of people in the workgroup working well together (E39), a significant main effect was found.

There was an interaction between supervisor type and workgroup type when employees were asked whether the people they work with do a good job (E34), and whether the workgroup is well run (E36). In primarily civilian workgroups, employees with civilian supervisors were less likely than employees with military supervisors to feel that the people they work with do a good job; in either mixed or primarily military workgroups, however, type of supervisor did not produce different results (E34). Also, in the finding discussed above, in which employees with civilian supervisors felt less positively about the way their workgroups are run than did employees with military supervisors (E36), this difference is most pronounced in primarily civilian workgroups.

Significant results of the employee Cooperation and Efficiency of Workgroups ANOVAs are shown in Table 12.

Table 12

Employee ANOVA Results: Cooperation and Efficiency of Workgroups

E34   The people I work with generally do a good job.

	Primarily Military Workgroup	Military/ Civilian Workgroup	Primarily Civilian Workgroup		
Military	3.88 (449)	3.96 (356)	4.11 (169)	3.95 (974)	
					n.s.
Civilian	3.85 (216)	3.99 (789)	3.91 (3675)	3.92 (4680)	
	3.87 (665)	3.63 (1145)	3.92 (3844)	3.93 (5654)	
		.01			.05

E36 All in all, my work group is well run.

	Primarily Military Workgroup	Military/ Civilian Workgroup	Primarily Civilian Workgroup		
Military	3.46 (446)	3.66 (355)	3.75 (168)	3.58 (969)	
					.001
Civilian	3.37 (216)	3.55 (788)	3.38 (3656)	3.41 (4660)	
	3.43 (662)	3.58 (1143)	3.40 (3824)	3.44 (5629)	
		.01			.05

(Continued)

Table 12 (Continued)

Employee ANOVA Results: Cooperation and Efficiency of Workgroups

E39   People in my unit work well together.

	Primarily Military Workgroup	Military/ Civilian Workgroup	Primarily Civilian Workgroup		
Military	3.56 (440)	3.65 (357)	3.83 (169)	3.64 (966)	
					.05
Civilian	3.54 (215)	3.62 (786)	3.60 (3655)	3.60 (4656)	
	3.55 (665)	3.63 (1143)	3.61 (3824)	3.61 (5622)	
		.05			n.s.

Civilians are important to management. Although employees with civilian supervisors reported more positive feelings about the working relationship between military and civilian personnel than did employees with military supervisors, the significant ANOVA effects within the employee dataset primarily pertained to differences among workgroup types.

For supervisors, individuals with civilian supervisors were more likely to report that civilians are important to management than were those with military supervisors. In addition, individuals in primarily civilian workgroups with civilian supervisors tended to perceive civilians as more important to management than did individuals in the other subgroups.

The primary findings for the employee and supervisor datasets regarding the importance of civilians to management are presented below.

Employee results. The only significant main effect of supervisor type appeared when employees were asked whether there was a good working relationship between civilian and military personnel at their present location. Employees with civilian supervisors felt more positive about the working relationship between military and civilians than did employees with military supervisors (E64).

Main effects of workgroup type were more common than the main effects of supervisor type. On the E64 question, employees in primarily civilian workgroups felt more positive about the working relationship between civilian and military personnel at their installation than did employees of either mixed or primarily military workgroups (E64). Employees in primarily civilian workgroups and in mixed workgroups were more likely to believe that civilians are made to feel like an important part of the Army team than were

36

employees in primarily military workgroups (SQ37). Employees in mixed workgroups felt more strongly that top management is concerned about civilian employees than did employees in primarily military workgroups (E56).

Significant results of the employee perception that Civilians are Important to Management ANOVAs are listed in Table 13.

Table 13

Employee ANOVA Results: Civilians are Important to Management

E56   Top management is concerned about civilian employees.

	Primarily Military Workgroup	Military/ Civilian Workgroup	Primarily Civilian Workgroup		
Military	2.64 (450)	2.91 (356)	2.96 (169)	2.79 (975)	
					n.s.
Civilian	2.72 (216)	2.79 (786)	2.76 (3661)	2.76 (4663)	
	2.67 (666)	2.83 (1142)	2.77 (3830)	2.77 (5638)	
		.01			n.s.

E64 There is a good working relationship between civilian and military personnel at this installation.

	Primarily Military Workgroup	Military/ Civilian Workgroup	Primarily Civilian Workgroup		
Military	3.24 (450)	3.44 (357)	3.54 (169)	3.37 (976)	
					.001
Civilian	3.45 (217)	3.60 (792)	3.64 (3659)	3.62 (4668)	
	3.31 (667)	3.55 (1149)	3.64 (3828)	3.58 (5644)	
		.001			n.s.

(Continued)

Table 13 (Continued)

Employee ANOVA Results: Civilians are Important to Management

SQ37 Civilians are made to feel that they are an important part of the Army team.

	Primarily Military Workgroup	Military/ Civilian Workgroup	Primarily Civilian Workgroup	
Military	2.78 (447)	3.16 (352)	3.16 (168)	2.98 (976)
				n.s.
Civilian	2.91 (213)	3.12 (785)	3.17 (3615)	3.15 (4613)
	2.82 (660)	3.13 (1137)	3.17 (3783)	3.12 (5580)
		.001		n.s.

Supervisor results. Supervisors with civilian supervisors felt that civilians are made to feel more a part of the Army team (SQ37) and rated the working relationship between civilian and military (S32) more highly than did those with military supervisors.

Overall, supervisors in primarily civilian workgroups felt more strongly that there are good working relationships between civilians and military (S32) and that top management is concerned about civilian employees than did those in mixed or primarily military workgroups (S21). In addition, as civilian composition of workgroups increased, there was a corresponding increase in the feeling that civilians are made to feel like an important part of the Army team (SQ37).

Only one significant interaction appeared in the supervisor data--that related to the question about whether top management is concerned about civilian employees (S21). Workgroup type did not influence how supervisors with civilian supervisors felt about top management's concern about civilian employees (S21). On the other hand, the feeling that top management is concerned about civilian employees increased for supervisors with military supervisors as a function of increased civilian composition (S21).

Significant results of the supervisors' perception that Civilians are Important to Management are shown in Table 14.

38

Table 14

Supervisor ANOVA Results: Civilians are Important to Management

S21   Top management is concerned about civilian employees.

	Primarily Military Workgroup	Military/ Civilian Workgroup	Primarily Civilian Workgroup	
Military	2.62 (117)	2.77 (403)	3.10 (451)	2.91 (971)
				n.s.
Civilian	2.85 (67)	2.94 (388)	2.99 (1748)	2.98 (2203)
	2.70 (184)	2.85 (791)	3.01 (2199)	2.95 (3174)
		.001		.01

S32 At this installation, there is a good working relationship between civilian and military personnel.

	Primarily Military Workgroup	Military/ Civilian Workgroup	Primarily Civilian Workgroup	
Military	3.17 (117)	3.24 (401)	3.47 (452)	3.34 (970)
				.001
Civilian	3.44 (68)	3.50 (387)	3.57 (1743)	3.55 (2198)
	3.27 (185)	3.37 (788)	3.55 (2199)	3.49 (3168)
		.001		n.s.

(Continued)

Table 14 (Continued)

Supervisor ANOVA Results: Civilians are Important to Management

SQ37 Civilians are made to feel that they are an important part of the Army team.

	Primarily Military Workgroup	Military/ Civilian Workgroup	Primarily Civilian Workgroup	
Military	2.69 (115)	3.01 (398)	3.24 (446)	3.08 (959)
				.01
Civilian	3.07 (68)	3.16 (374)	3.29 (1730)	3.26 (2172)
	2.83 (183)	3.08 (772)	3.28 (2176)	3.20 (3131)
		.001		n.s.

General satisfaction. The primary findings for the employee and supervisor datasets regarding the variables in the general satisfaction category are presented below. In general, the highest satisfaction occurred in mixed workgroups. With few exceptions, there were no differences involving supervisor type.

Employee results. Employees with military supervisors expressed more positive attitudes about management than did employees with civilian supervisors (ECOMP1).

Employees in mixed workgroups have significantly higher job satisfaction than employees in either of the other workgroups (ECOMP2). They also expressed more positive attitudes about management (ECOMP1) than did employees in primarily civilian workgroups.

Significant (employee) General Satisfaction results are shown in Table 15.

Table 15

Employee ANOVA Results: General Satisfaction

ECOMP1 Evaluation of management.

	Primarily Military Workgroup	Military/ Civilian Workgroup	Primarily Civilian Workgroup		
Military	3.00 (447)	3.22 (353)	3.13 (168)	3.10 (968)	
					.001
Civilian	2.88 (213)	2.99 (789)	2.89 (3629)	2.91 (4631)	
	2.96 (660)	3.06 (1142)	2.90 (3797)	2.94 (5599)	
		.01		n.s.	

ECOMP2 Job satisfaction.

	Primarily Military Workgroup	Military/ Civilian Workgroup	Primarily Civilian Workgroup	
Military	3.28 (452)	3.48 (358)	3.45 (169)	3.38 (979)
				n.s.
Civilian	3.35 (217)	3.43 (796)	3.36 (3686)	3.37 (4699)
	3.30 (669)	3.45 (1154)	3.36 (3855)	3.37 (5678)
		.01		n.s.

Supervisor results. Supervisors with civilian supervisors expressed a greater intention to remain with the Army until they retire than did supervisors with military supervisors (S45).

41

All other significant effects within the supervisor dataset were interactions. Ratings of job satisfaction were essentially the same across workgroups for supervisors with civilian supervisors, but ratings of job satisfaction for supervisors with military supervisors increased as the civilian workgroup composition increased (SCOMP2).

In mixed or primarily military workgroups, supervisors with civilian supervisors were more likely than those with military supervisors to recommend employers similar to their own. This relationship was reversed with primarily civilian workgroups (SCOMP10).

Significant (supervisor) results of General Satisfaction are shown in Table 16.

Table 16

Supervisor ANOVA Results: General Satisfaction

SCOMP1	Evaluation of management.				
	Primarily Military Workgroup	Military/ Civilian Workgroup	Primarily Civilian Workgroup		
Military	3.23 (115)	3.32 (398)	3.47 (446)	3.38 (959)	
					n.s.
Civilian	3.34 (68)	3.25 (777)	3.25 (1732)	3.25 (2177)	
	3.27 (183)	3.29 (775)	3.30 (2178)	3.29 (3136)	
		n.s.			.05

42

Table 16 (Continued)

Supervisor ANOVA Results: General Satisfaction

SCOMP2 Job satisfaction

	Primarily Military Workgroup	Military/ Civilian Workgroup	Primarily Civilian Workgroup		
Military	3.78 (117)	3.94 (404)	4.02 (453)	3.96 (974)	
					n.s.
Civilian	3.83 (68)	3.86 (388)	3.80 (1752)	3.81 (2208)	
	3.80 (185)	3.90 (793)	3.85 (2205)	3.86 (3182)	
		n.s.		.05	

SCOMP10 Recommends employer similar to own.

	Primarily Military Workgroup	Military/ Civilian Workgroup	Primarily Civilian Workgroup		
Military	3.23 (118)	3.15 (405)	3.25 (454)	3.21 (977)	
					n.s.
Civilian	3.38 (68)	3.26 (388)	3.12 (1760)	3.15 (2216)	
	3.28 (186)	3.20 (793)	3.15 (2214)	3.17 (3193)	
		n.s.		.01	

(Continued)

43

Table 16 (Continued)

Supervisor ANOVA Results: General Satisfaction

S45 I plan to remain with the Army until I retire.

	Primarily Military Workgroup	Military/ Civilian Workgroup	Primarily Civilian Workgroup	
Military	3.70 (116)	3.93 (399)	4.01 (448)	3.94 (963)
				.01
Civilian	4.07 (68)	3.98 (385)	4.01 (1733)	4.01 (2186)
	3.84 (184)	3.95 (784)	4.01 (2181)	3.99 (3149)
		n.s.		n.s.

Regression Analyses

As previously discussed, the purpose of the regression analyses on variables with significant ANOVAs was to assess the strength of the relationships between military/civilian workgroup composition and supervisor type with the dependent variable *after* accounting for the effects of various demographic factors such as gender, race, grade level, length of service, and education. As described earlier, because of the large sample size, the independent variables accounted for a significant proportion of the variance in the dependent variables. A decision was made that if the total variance accounted for was less than 5%, this amount, although statistically significant, was not meaningful, and therefore would not be reported. Those regression analyses that accounted for more than 5% of the variance in the dependent variable are reported below. These results were examined for significant increases in variance accounted for (R-squared) due to workgroup composition and supervisor type. The effect sizes of these variables were also examined.

Employee results. "Job satisfaction" (ECOMP2) was the only significant variable in the employee data set where significant increases in R-squared were detected for the three steps in the hierarchical regression analysis. The demographic variables accounted for 5.0% of the variance, the combined main effects of supervisor and workgroup types accounted for 0.17% of the variance, and the interaction between supervisor type and workgroup type accounted for 0.14% of the variance.

Perceived supervisor support for training. *Supervisor results.* Under this category the only dependent variable for which more than 5% of the variance was accounted was "I have a

written IDP" (SQ10). Significant increases in R-squared were obtained from steps 1 and 2, representing the demographic variables and the main effects of supervisor and work group types. The demographic variables accounted for 7.0% of the variance and the two main effects accounted for an additional 0.34%.

Knowledge and use of performance appraisal procedures *Supervisor results.* The independent variables accounted for more than 5% of the variance of two dependent variables in the knowledge and use of performance appraisal procedures content area. The first was "I helped develop my performance standards" (SQ7). The regression analyses revealed significant increases in R-squared from the demographic variables (6.1% of the variance), and the combined main effects of supervisor and workgroup types (1.8% of the variance).

The second variable was "My employees participate in developing performance standards for their jobs" (SQ39) which showed significant increases in R-squared for both the demographic variables (7.2% of the variance) and the combined effects of supervisor and workgroup types (1.5% of the variance).

General satisfaction. *Supervisor results.* Under this category two dependent variables had more than 5% of the variance accounted for by the independent variables. "Job satisfaction" (SCOMP2) revealed significant increases in R-squared from the demographic variables (4.8% of the variance), the combined main effects of supervisor and workgroup types (0.4% of the variance), and the interaction of supervisor type and workgroup type (0.2%).

The second variable was "I plan to remain with the Army until I retire" (S45), which revealed significant increases in R-squared from entering the demographic variables (14.4% of the variance) and the interaction between supervisor type and workgroup type (0.14% of the variance).

Discussion

The ANOVA analyses indicate that differences exist between individuals with civilian supervisors and those with military supervisors. More specifically, employees generally rate military supervisors more positively compared to civilian supervisors. Although civilian supervisors were seen as more supportive of training needs, military supervisors were viewed as more knowledgeable about performance appraisal procedures and better at developing cooperation and efficiency in the workgroup. In addition, employees with military supervisors had higher job satisfaction than employees with civilian supervisors, and military supervisors were given higher overall evaluations than were civilian supervisors.

Similar analyses of the supervisor dataset revealed a more positive evaluation of the civilian supervisor. Compared to military supervisors, civilian supervisors were seen as being more supportive of training needs. In addition, people with civilian supervisors reported a higher intent to remain in the Army and a greater sense that civilians are important to upper management. Only in knowledge of performance appraisal procedures were military supervisors seen as superior to civilian supervisors.

With respect to workgroup composition, ANOVA analyses of the employee dataset indicate that employees in mixed workgroups were generally more pleased with their work environment than were individuals in primarily military workgroups. They reported higher job satisfaction, more support for training needs, and a greater feeling that civilians are important to management, compared to employees in primarily military workgroups.

In the supervisory dataset, evaluations in civilian workgroups were generally higher compared to military workgroups. Support for training needs, military/civilian working relationships, and job satisfaction (for employees with military supervisors) were higher in civilian workgroups compared to military workgroups.

Overall, the ANOVA analyses suggest that employees prefer military supervisors over civilian supervisors, while supervisory employees rate civilian supervisors above military supervisors. Both employees and supervisors were generally happier working in a mixed military/civilian workgroup or a primarily civilian workgroup.

Because the above findings were based on relatively small effect sizes, perhaps the most compelling finding of this research has to do with the use of the two-stage data analysis procedure. While the ANOVAs indicated that the findings reported above were statistically reliable, in studies such as these with large sample sizes it is important to examine the magnitude of the differences. Large sample sizes generate so much statistical power that even small group differences can achieve "statistical" significance. To address this issue and to determine whether demographic factors might account for the ANOVA findings, regression analyses were conducted on the subset of significant variables, as reported above.

The results of the regression analyses suggest that the ANOVA findings should be interpreted with caution. The amount of variance accounted for by supervisory type and workgroup composition, while statistically significant, was very small (less than 2%). Thus,

differences in supervisor type and workgroup composition do not substantively affect the ratings given by employees and supervisors.

Even though the two-stage analysis procedure detected significant, but small, military-civilian differences, the question remains as to the possibility of meaningful differences. Ratings of military supervisors were expected to be substantially higher compared to civilian supervisors because military personnel receive on-the-job leadership experience throughout their career. Moreover, these individuals are exposed to extensive classroom training to supplement their on-the-job experience. In contrast, civilian supervisors receive only one short, two-week training course which focuses mostly on the administrative requirements associated with supervising others. Despite these differences, civilian supervisors seem to hold their own vis-a-vis military supervisors.

There are several possible explanations for the similarity in ratings given to military and civilian supervisors. One view is that there really are no differences of consequence between military and civilian supervisors. Perhaps civilian supervisors are more accustomed to working with civilians, and this familiarity offsets the stronger experiential leadership base possessed by military supervisors. This explanation suggests that leading civilians is, at least in part, substantively different from leading military personnel.

An alternate explanation is that there are no differences because some civilian supervisors have been in these positions long enough to acquire a leadership repertoire similar to that of military personnel. If this is true, then military/civilian differences should occur only among supervisors who are novices. To test this hypothesis it would be necessary to obtain comparison data from a comparable set of military supervisors and conduct an analysis to determine whether military/civilian supervisory differences existed for both novice and experienced supervisors.

Still another possibility is that meaningful differences do exist between military and civilian supervisors, but that these differences went undetected because of insufficient variability in the response options. In this case, consideration should be given to making the survey more sensitive to response variability, either by changing the instructions to minimize neutral responding or by changing the response option scale from 5 to 7 points. This possibility gains some support in that the means of nearly all response items were between 3.5 and 3.8.

Finally, it is possible that meaningful differences between military and civilian supervisors do exist but are obscured by a bias held by the (civilian) respondents to this survey, that is, civilians may rate other civilians higher (or rate military personnel lower) than they deserve. One way to test this hypothesis would be to administer the survey to both civilian and military employees and then assess the degree to which these groups differ in their responses. Of course, if differences occurred, it would be impossible to say which point of view was closer to the truth since military respondents might be every bit as biased as civilian respondents. On the other hand, close agreement between the two groups would indicate that such cultural bias was not present and would provide greater confidence in the validity of the findings in the current analyses.

Recommendations

The results of this study show how the choice of statistical analysis procedure can influence the nature of the findings. Had we stopped with the ANOVA results several of the findings would have indicated strong differences in the perception of military-civilian relationships across supervisor type and workgroup composition. As the multiple regression analyses demonstrated, however, these differences are relatively weak.

Despite the tenuous statistical nature of the findings in this report, four areas emerged as promising fields for further research. One recommendation, in fact, is to develop sensitive measures of some of the key variables regarding civilian and military supervisors and collect additional data to assess potential differences.

A second recommendation for further study involves collecting new data that will enable investigators to follow direct connections between employees, their first-level supervisor, and their second-level supervisor. In this way it would be possible to determine the extent to which the positive or negative attributes and ratings are created or reflected through the levels of leadership.

A third recommendation is to further investigate the role of experience in developing civilian supervisors. One of the possible explanations for the current findings was that experienced civilian supervisors acquired skills on the job that help them to become more like their more highly trained military counterparts. Unfortunately, the existing datasets contained no specific information on military supervisors to enable a direct comparison.

A final recommendation has to do with the development of work-enhancing strategies. Regardless of the specific findings, the results clearly indicate that generally both military and civilian supervisors received mediocre ratings. The results indicate that neither supervisor type nor workgroup composition contributed in any substantial way to the variance accounted for in the dependent variables in this study. Therefore, the focus for work enhancing strategies should be on supervisory skills, in particular as they might be applied specifically to military-civilian relationships. To develop training to enhance supervisory skills it will be necessary to identify specific areas of focus (e.g., interpersonal communications). Such data could be collected by way of a survey or interviews with a variety of employees. However, these different strategies will have different probabilities of success and different levels of employees will have varying need for such interventions. Future efforts should evaluate the costs/benefits of various interventions to determine the efforts most likely to benefit the Army.

REFERENCES

Broedling, L. A., Lau, A. W., & Newman, A. (1981). The relationship between senior Navy civilian and military executives. Naval War College Review, 78-89.

Clark, S. B., Sweeney, D. H., & Savell, J. M. (1988). Establishing priorities for civilian personnel management research in the Army (ARI Research Report 1474). Alexandria, VA: U.S. Army Research Institute for the Behavioral and Social Sciences. (ADA 197 397)

Paulsen, R. E., Lt. Cdr. (1965). Military managers in the joint military-civil service organization. Monterey, CA: Naval Postgraduate School.

Reznik, S. G., Capt. (1985). Working with civilians: An R & D perspective. Air University Review, 82-85.

Sadacca, R., Jones, K. N., DiFazio, A. S., Rigby, C. K., & Kilcullen, R. N. (1994). FY 88 biennial survey of Army civilians: Formation of item composites and investigation of broad demographic trends (ARI Research Note 94-23). Alexandria, VA: U.S. Army Research Institute for the Behavioral and Social Sciences.

Stupak, R. J., Dr. (1981). Military professionals and civilian careerists in the Department of Defense. Air University Review, 32(5), 68-75.

Woolley, S. F., Croan, G. M., & Cohart, J. (1986). Army strategic plan for civilian personnel management research: A roadmap for the future. Oakton, VA: Caliber Associates. Prepared for Headquarters, Department of the Army, Office of the Deputy Chief of Staff for Personnel, Directorate of Civilian Personnel.

Army Regulations

AR 690-950   Career Management (8 September 1988)
AR 690-400   Employee Performance and Utilization